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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Paul Boisvert  
Serial No.: 10/789,741  
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For : Flash Valve  
Examiner: N/A  
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**ENGLISH TRANSLATION OF  
FOREIGN LANGUAGE APPLICATION**

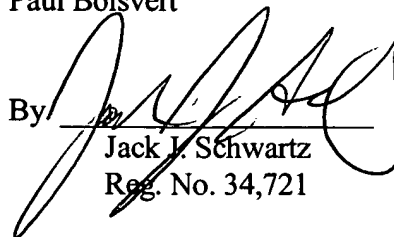
Mail Stop Missing Parts  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Attached please find an English language translation of the originally filed application which was filed in a foreign language. Applicant respectfully submits that the translation submitted herewith is an accurate translation of the originally filed application. The surcharge fee of \$130.00 for an English language translation is to be charged to the credit card indicated in the attached credit card authorization form.

Respectfully submitted,  
Paul Boisvert

By/



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FLASH VALVE  
TOILET

DRAWING LIST

- Fig. A – Elevation view, toilet, right side
- Fig. B – Central vertical section view
- Fig. C – Front elevation view
- Fig. D – Rear elevation view
- Fig. E – View from under toilet
- Fig. F – Section B-B
- Fig. G – Section A-A
- Fig. H – View from above toilet
- Fig. I – View from under the upper part of the toilet
- Fig. J – View from above the lower part of the toilet

## TOILET

### ITEM DESCRIPTION

- 10 – Main body of toilet
- 11 – Toilet tank lid
- 12 – Flush control handle
- 13 – Seat and seat lid
- 14 – Point of water entry into toilet
- 15 – Rear opening for toilet mounting and maintenance
- 16 – Water pipe for the toilet bowl rim
- 17 – Toilet bowl
- 18 – Orifices pierced through the bowl rim for the flush water
- 19 – Orifices in the bottom of the bowl, for priority evacuation of bowl contents
- 20 – Toilet bowl siphon
- 21 – Toilet bowl accessory chamber
- 22 – Air reservoir with diaphragm
- 23 – Orifices for bolts anchoring toilet to floor
- 24 – Flush valve (flushometer)
- 25 – Water conduit to orifice (19) at bottom of bowl
- 26 – Water conduit, connected at 90 degrees from conduit (25) to supply bowl rim (16).

## WALL-MOUNTED TOILET

### DRAWING LIST

Fig. A – Lateral elevation view

Fig. B – Front elevation view

Fig. C – View from above

Fig. D – View from above and in the rear wall of the toilet when the wall lid is removed

Fig. E – Central vertical cross section view

Fig. F – Toilet anchoring details

Fig. G – Wall hanger

Fig. H – Double hanger

Fig. I – Hanger extension

Fig. J – Hanger support

Fig. K – Vertical cross section view of wall cover (11)

Fig. L – Driftbolt (31) and orifice (30), lid assembly (11) on the toilet

Fig. M – Central section view of toilet siphon and sewer drain

Fig. N – Rear view of siphon and wall-mounted toilet.

## WALL-MOUNTED TOILET

### ITEM DESCRIPTION

- 10 – Wall-mounted toilet
- 11 – Tank cover for wall-mounted toilet
- 12 – Flush handle
- 13 – Anchoring bolts
- 14 – Orifices for bolting the toilet seat
- 15 – [illegible] of the toilet [X-ed out]
- 16 – Water conduit around bowl rim
- 17 – Toilet bowl
- 18 – Orifices under bowl rim
- 19 – Orifices at bottom of bowl
- 20 – Toilet siphon
- 21 – Accessory chamber
- 22 – Air reservoir
- 23 – Bolting plate for toilet siphon (20) with sewer drain
- 24 – Flush valve (flushometer)
- 25 – Wall hanger
- 26 – Double hanger
- 27 – Extension
- 28 – Hanger support
- 29 – Orifices for nailing and screwing the wall framework
- 30 – Orifice for wall-mounted tank lid (11) driftbolt
- 31 – Wall-mounted tank lid driftbolt
- 32 – Hanger for holding up the wall-mounted tank lid
- 33 – Flexible sealed coupling for assembling siphon (20) to the sewer line

## ANCHORING SYSTEM

### DRAWING LIST

Fig. A-

Perspective elevation view of the toilet anchoring stem

### ITEM DESCRIPTION

10-

Sewer line attachment base, the most popular type of attachment

11-

Floor base bolt

12-

Hexagonal threaded bushing with head and groove for use with standard slot screwdriver

13-

Assembly bolt for bushings (12) and (12) [sic]

14-

Connecting bolt for toilet seat

### CLAIMS

1-

Anchoring rod Fig. A, preassembled with bushing (12 B), inserted into the top of the toilet, and screwed down into bushing A which was already firmly pre-screwed to bolt (11) to hold the toilet to the floor. In the top of this rod, bolt (14) serves to hold the toilet seat in place.

2-

A hexagonal-shape busing (12 A) and (12 B) featuring a hexagonal head (15), is threaded inside so that it can be bolted to rod (13), and bolts (11) and (14). This head features a groove to accommodate a flat screwdriver.

**VALVE**  
**(flushometer)**

**DRAWING LIST**

- Fig. A – Perspective view of valve (10) **(flushometer)**
- Fig. B – Top of valve (10) and (11).
- Fig. C – Lateral elevation view (see connecting pipe (15) with 15 degree bend)
- Fig. D – Bottom of valve (10)
- Fig. E – Lateral front elevation of connecting pipe (15).
- Fig. F – Bottom of lower portion of valve (10).
- Fig. G – Section view AA of the valve, showing water entry point (14) and exit point (18).
- Fig. H – Section view BB of the valve, showing connecting pipe (15), ball valve (22), and water outlet conduit (18).
- Fig. I – Bottom of upper part of valve (11) (see vault (29), pipelines (19) and (20))
- Fig. J – Section view CC of upper part (11) (see pipelines (19), (20) and mini valve (12)).
- Fig. K – View from below flexible diaphragm (21), (see 6 orifices (13)), for assembly bolts in parts (10) and (11), 2 orifices for pipelines (10) and (20), and control plug (31).
- Fig. L – Section view of diaphragm (21),
- Fig. M – Side view of diaphragm (21).

VALVE  
ITEM DESCRIPTION

- 10- View, lower part of valve
- 11- View, upper part of valve
- 12- Adjustable mini valve
- 13- Assembly orifices for 8 standard bolts
- 14- Water inlet pipe
- 15- Pipe for assembling the valve to the toilet and to the flush handle
- 16- Support spacing blocks for the toilet tank wall, fig. C.
- 17- Toilet tank walls
- 18- Outlet pipe for contents flushed from toilet
- 19- Pipe passing from ball valve (22) for activating flush mechanism
- 20- Pipe passing through the mini valve for regulating filling of space (22), fig. G.
- 21- Flexible diaphragm
- 22- Ball valve in flush activator
- 23- Space for accommodating hydraulic pressure on diaphragm (21)



- 24- Space for accommodating hydraulic pressure under diaphragm 2;.[sic]
- 25- Assembly washer for holding plug (31) in place.
- 26- Standard bolt with nut
- 27- Square extension for adjusting inside the square opening in wall (17) of the toilet tank
- 28- Dotted lines showing the movement of diaphragm (21), fig. H, activated by changes in hydraulic pressure
- 29- Tubular vault for housing pressure spring on diaphragm (21), and where conduits (19) and (20) meet.
- 30- Pressure spring on diaphragm (21)
- 31- Control plug, affixed under diaphragm 21.

## FLUSH HANDLE

### DRAWING LIST

- Fig. A- Front view of handle (10).
- Fig. B- Section view AA of handle
- Fig. C- Rear view of handle
- Fig. D- Bottom view of handle
- Fig. E- Side view of handle
- Fig. F- Front view of chassis (11)
- Fig. G- Section view BB of chassis (11)
- Fig. H- Front view of chassis (11)
- Fig. I- Central assembly block (12)
- Fig. J- Side view of central block
- Fig. K- Front view of central block
- Fig. L- Section view of washer (13)
- Fig. M- Front of washer (13)
- Fig. N- Front elevation of chassis (11)
- Fig. O- Extension 1 of ball valve assembly arm
- Fig. P- Extension 2 of ball valve assembly arm

TOILET HANDLE  
ITEM DESCRIPTION

- 10- Lid for handle (10)
- 11- Chassis for handle (10)
- 12- Central block for handle (10)
- 13- Assembly washer for central block (12) to hold chassis (11) in a slot
- 14- Bolt for assembling handle cover to chassis
- 15- Adjustment orifices for assembly arms so that the ball valve is sealed
- 16- Recess in the handle cover for recess (17)
- 17- Recess in the chassis for recess (16)
- 18- Stabilizing support for the handle cover
- 19- Springs that bring the handle back into the vertical position
- 20- Extension 1 to activate ball valve (22)
- 21- Extension 2 to activate ball valve (22)

## SPECIFICS

In all areas of our planet, potable water resources are gradually diminishing in spite of restrictions imposed in some countries. Seeing the water levels in lakes, rivers, and the water table getting lower is troubling to all nations on earth.

Closer to home, in our North American households, 45% of all potable water used is consumed by our conventional toilets. Americans use up 50,000 liters of potable water to evacuate 600 liters of waste, a ratio of 83% (source ECONOWATCH USA.). Specialized organizations have affirmed that 5 billion liters of potable water are used in the USA every day.

In North America, some efforts have been taken to reduce consumption of water in our toilets to 1.6 LPF; even so these toilets have not achieved the level of performance required to satisfy consumers.

In the face of these problems, I became interested in them. After a few years of research and experimentation, I succeeded in constructing prototypes of toilets that were more sanitary at the bolting level on the floor, with a superior flushing performance, on average, and water consumption that is even more greatly reduced, and whose flush cycle is 8 seconds long.

These toilets can be installed on any conventional floor attachment base, and can be connected to the same water supply piping system.

It is known that 80% of our conventional toilets lose water 24 hours per day, because the flap gate in the reservoir closes only by gravity, without any pressure. This flow of water is almost invisible, because the piping between the supply tank and the toilet bowl are internal.

With a new valve (flushometer) invented for this toilet, a flexible diaphragm covering the flush evacuation conduit is held in place by the water supply pressure, which reduces to zero all losses by flow out of the toilet tank between flushes.

During my research, I developed two different toilets, the first model for installation on the floor, and a second model hung on the wall, which leaves the floor completely free.

These two toilet models include 5 series of drawings, which are complementary to each other.